

**Amendments to the Claims**

1. *(Currently Amended)* An integrated circuit (~~IC~~) comprising a network, the network comprising a plurality of routers (~~R<sub>1</sub>, R<sub>2</sub> up to and including R<sub>n</sub>~~), at least one of the routers comprising a plurality of input ports (~~102, 104, 106~~) arranged to receive input data (~~Input\_1, Input\_2, Input\_3~~) corresponding to at least two traffic classes, the routers further comprising a plurality of queues (~~108a, 108b, 110a, 110b, 112a, 112b~~), the queues being arranged to store input data corresponding to a single traffic class, wherein the input ports are coupled to at least two of the queues, the routers further comprising a switch (~~700~~), characterized in that the switch (~~700~~) is arranged to receive input from the plurality of queues (~~108a, 108b, 110a, 110b, 112a, 112b~~) simultaneously.

2. *(Currently Amended)* An integrated circuit (~~IC~~) as claimed in claim 1, wherein a first selection (~~108a, 110a, 112a~~) of the queues is arranged to store input data corresponding to a high priority traffic class, and wherein a second selection (~~108b, 110b, 112b~~) of the queues is arranged to store input data corresponding to a low priority traffic class.

3. *(Currently Amended)* An integrated circuit (~~IC~~) as claimed in claim 2, wherein the first selection (~~108a, 110a, 112a~~) is deployed to provide guaranteed communication services in the network, and wherein the second selection (~~108b, 110b, 112b~~) is deployed to provide best-effort communication services in the network.

4. *(Currently Amended)* An integrated circuit (~~IC~~) as claimed in claim 1, further comprising a controller (~~100~~) which is coupled to the input ports (~~102, 104, 106~~) and coupled to the switch (~~700~~), the controller (~~100~~) comprising a plurality of arbiters, wherein the arbiters of at least one of the traffic classes implement a predetermined schedule.

5. *(Currently Amended)* An integrated circuit (~~IC~~) as claimed in claim 1, wherein the switch comprises a plurality of multiplexers (~~800, 802, 804~~), each

multiplexer being coupled to an output port, and each one of the multiplexers being arranged to accept as input the input data stored in the queues (~~108a, 108b, 110a, 110b, 112a, 112b~~).

6. (*Currently Amended*)            A method for avoiding starvation of data in an integrated circuit (~~IC~~) comprising a network, the network comprising a plurality of routers (~~R<sub>1</sub>, R<sub>2</sub> up to and including R<sub>N</sub>~~), at least one of the routers comprising a plurality of input ports (~~102, 104, 106~~) receiving input data (~~Input\_1, Input\_2, Input\_3~~) corresponding to at least two traffic classes, the routers further comprising a plurality of queues (~~108a, 108b, 110a, 110b, 112a, 112b~~), wherein the queues store input data corresponding to a single traffic class, the input ports being coupled to at least two of the queues, the routers further comprising a switch (~~700~~), characterized in that the switch (~~700~~) receives input from the plurality of queues (~~108a, 108b, 110a, 110b, 112a, 112b~~) simultaneously.